PROTOCOL FOR UPDATING CERTIFICATES OF APPROVAL FOR AIR EMISSIONS

Ministry of the Environment

January 2005

PIBS 5016e

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Ministry of the Environment
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Introduction

The Ministry of the Environment (Ministry) has a broad mandate to provide for the protection and conservation of the natural environment of Ontario. Certificates of Approval (Cs of A) are one way that the Ministry works to achieve its environmental protection objectives.

For the first time, the Ministry has documented its protocols for updating Cs of A to provide a "one stop" information source on *how* and *when* Cs of A are updated through a continuous improvement cycle. These protocols will:

- clearly communicate to proponents in the regulated community and to the public the Ministry's objectives and processes for updating specific types of Cs of A;
- outline the Ministry's current priorities for updating Cs of A that it reviews. While these may change over time, this information will assist proponents to understand which Cs of A are more likely to be considered for updating;
- improve the administration of the approvals process by encouraging Consolidated Cs of A and Basic Comprehensive Cs of A;
- indicate how proponents can obtain information that explains the environmental protection requirements of the project;
- promote consistency in the approvals process; and
- provide opportunities for public transparency in Ministry decision making and foster continuous improvement.

These protocols for updating Cs of A will continue to take a balanced approach. This approach looks at both the benefits and cost of implementing new requirements to achieve those benefits without compromising health or safety.

The Ministry has produced four protocols for updating Cs of A, each targeted to one of the following environmental media:

- Sewage Works
- Air Emissions
- Drinking-Water Systems
- Waste Management

Each protocol contains the same basic information regarding the overall review process and is customized for the specific type of Cs of A.

This is the *Protocol for Updating Certificates of Approval for Air Emissions* (Protocol). Information in this Protocol is organized in four sections:

- Introduction
- What are Certificates of Approval?
- Protocol for Updating Air Emissions Certificates of Approval
- Assessment Criteria for Air Emissions

Additional information can be obtained from:

Ministry of the Environment
Environmental Assessment and Approvals Branch
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Toronto, ON M4V 1L5

Telephone: (416) 314-8001 or Toll Free: 1-800-461-6290
Fax: (416) 314-8452

Or visit the Ministry Web site at: www.ene.gov.on.ca.

What are Certificates of Approval?

Certificates of Approval (Cs of A) are required by the *Environmental Protection Act* and the *Ontario Water Resources Act* for specific activities related to sewage works, air and noise emissions, and waste management activities. Approvals are required by the *Safe Drinking Water Act, 2002* for specific activities related to drinking-water systems.

The primary purpose of Cs of A, in the context of air and noise emissions, is to ensure that the proposed activities or amendments to the activities is established, altered, extended or replaced in accordance with Ministry requirements. In addition, the Cs of A outline performance standards that:

- protect human health and the environment by preventing potential harmful effects;
- require a facility to conform to generally accepted engineering practices with the potential to operate reliably;
- provide minimum requirements for compliance with as set out in acts, regulations, standards, policies, guidelines and procedures; and
- outline specific responsibilities of facility owners and operators.

Each Certificate of Approval (C of A) is site-specific and tailored to the individual circumstances and characteristics of the facility and its local environment. The C of A places legally binding requirements on the owner/operator of the facility intended to prevent or manage environmental impacts.

A C of A reflects the Ministry's environmental protection requirements in effect at the time it is issued. New environmental protection requirements continue to be developed over time and are reflected in Ministry policies, guidelines, procedures, and legislative/regulatory frameworks. One of the purposes of this Protocol is to formalize a continuous improvement cycle so that existing Cs of A keep pace with these changes.

A Director, for the purposes of this Protocol, is an individual that is appointed pursuant to Section 9 of the *Environmental Protection Act* (EPA) by the Minister of the Environment. A decision on whether to update a C of A, in accordance with this Protocol, is made by the Director, on an individual basis using his or her discretion as outlined in Section 9 of the EPA. This gives the Director the discretionary authority to grant or amend an approval, refuse to grant or revoke or suspend the approval.

Ministry documents such as this and other appropriate documents in Appendix A may be considered by the Director in making these decisions.

Certificates of Approval – Air

Since October 1, 1998, the Ministry has required a complete Emission Summary and Dispersion Modelling (ESDM) Report when an application for approval under Section 9 of the *Environmental Protection Act* is submitted. The ESDM Report must:

- be prepared in accordance with the Ministry's "Procedure for Preparing an Emission Summary and Dispersion Modelling Report", dated June 1998, as amended from time to time; and
- contain an assessment of all sources of common contaminants with the sources that are the subject of the application.

An approval of all sources of emission (including previously unapproved sources) will be issued by the Ministry regardless of the installation date provided the owner/operator can demonstrate compliance with Regulation 346 for the aggregate emissions from the facility and an application has been submitted for all sources of emission.

The Ministry will assess the ESDM Report and application documents and will hold the applicant accountable for demonstrating that all sources of common contaminants have been included in the ESDM Report, regardless of their approval status. Unapproved sources that are included in the ESDM Report which are not the subject of the application will not be included in any C of A. The applicant is responsible for demonstrating that the facility is in compliance with Regulation 346 for the contaminants under review. In addition, new air standards implemented through Regulation 346 automatically apply to all sources as identified in the regulation.

The Ministry is taking steps to improve the level of environmental protection through its ongoing efforts to consolidate multiple air emissions Cs of A into:

- Consolidated Certificates of Approval, or
- Basic Comprehensive Certificates of Approval.

Moving in the direction of creating single, consolidated Cs of A is expected to bring about enhanced emitter accountability and help achieve greater compliance with regulations. The consolidation of multiple air Cs of A can take place as part of the review process outlined in this Protocol as well as independently. Two types of Cs of A, consolidated and comprehensive, are discussed below.

Consolidated Certificates of Approval – Air Emissions

Consolidated Certificates of Approval replace multiple existing Cs of A into a single C of A and may include new or historically unapproved sources of emissions. A Consolidated C of A may include all sources of contaminants from the facility or may be limited to sources that have common contaminants and are the subject of the review.

An owner/operator is required to apply for an amendment to the facility's Consolidated C of A before making any modifications that require approval.

Basic Comprehensive Certificates of Approval – Air Emissions

A Basic Comprehensive Certificate of Approval replaces all existing Cs of A for a facility and includes new or historically unapproved sources of emissions. It provides owners/operators with limited operational flexibility to make modifications up to an approved Facility Production Limit without the need to seek amendment to their Basic Comprehensive C of A (for example process changes, de-bottlenecking or addition of new equipment). The result is improved efficiencies and reduced administrative costs for both Ontario industry and the Ministry.

The Ministry also developed Basic Comprehensive Cs of A as part of its commitment to increasing emitter accountability and enhancing compliance with regulations for aggregate emissions from a facility.

> **Basic Comprehensive Cs of A are the only type of approval that are continually updated and represent the Ministry's preferred approach for all approvals related to air emissions.**

The Ministry has developed additional reference materials to supplement the application guidance package and provide support for owners/operators issued with Basic Comprehensive Cs of A. For more information on Basic Comprehensive Cs of A refer to the Ministry document entitled "Basic Comprehensive Certificates of Approval (Air): A User Guide".

Protocol for Updating Air Emissions Certificates of Approval

What are the Objectives of the Protocol?

In this first phase of implementation, the focus of the *Protocol for Updating Certificates of Approval for Air Emissions* is on encouraging facilities to make **an application for a Consolidated or Basic Comprehensive C of A.**

The focus of the existing air approval program is on holding the emitter accountable for ensuring that their facilities are in compliance with Regulation 346 - General Air Pollution under the *Environmental Protection Act*. An important tool used to assess compliance with Regulation 346 is the Emission Summary and Dispersion Modelling (ESDM) Report.

All applicants are held accountable for ensuring that:

- as a minimum, a properly prepared ESDM Report is submitted for all the contaminants in common with the sources in the application;
- for a site-wide Consolidated C of A, a properly prepared ESDM Report is submitted for all contaminants emitted by all sources at the facility;
- for applications for a Basic Comprehensive C of A, the ESDM Report is submitted for all contaminants. Conditions on the Basic Comprehensive C of A will require that the ESDM Report be maintained on an ongoing basis by the proponent and, in return, will allow for limited operational flexibility; and
- a list of existing Cs of A is included when preparing an application. This list is used by the Ministry when it considers whether multiple Cs of A for similar equipment should be consolidated into a single Consolidated C of A.

An incomplete application, that does not contain the minimum information requirements or follow the requirements outlined in published Ministry procedures, will be returned without a technical review and applicants will be required to resubmit their application.

The Ministry may also choose to assess and update other types of Cs of A for air emissions based on site-specific information or to support other environmental protection priorities at any time. The detailed assessment criteria used by the Ministry to determine new or changed requirements that will be included in an updated air C of A are discussed in the next section.

When will the Protocol be used to update a C of A?

When the Ministry reviews an existing Air Emissions C of A for any reason, this Protocol will be used to determine if any changes to requirements should be incorporated. An outline of this process is presented in Figure 1.

The Ministry may update an existing C of A when:

- an owner makes an application to the Ministry for a change to the existing equipment, processes, production rates or for an expansion of plant capacity (excluding applications for minor changes and administrative amendments); or
- Ministry staff, through the course of compliance, inspection or enforcement activities, identifies a facility that is appropriate for a more in-depth assessment.

In addition, the Ministry may also target specific sectors and/or types of facilities with more significant potential environmental or health impacts based on overall Ministry and government environmental protection priorities.

There is also an existing mechanism under the *Environmental Bill of Rights* (EBR) through which the public may make an application to review an existing C of A.

What is the Process?

Regardless of the mechanism used to trigger the C of A review, this Protocol will be used to determine the scope of the update. The more assessment criteria that apply to a C of A (details in next section), the more likely it is that a C of A update will be required.

The Ministry will work and communicate directly with the facility owner throughout the process when a proponent with an existing C of A comes forward with an application to amend its current operation. Pre-application consultation is an important component of the application process. It can include discussing the extent to which the Ministry may require new or amended requirements in an updated C of A. By actively engaging in dialogue, the Ministry and the proponent can work together to define the environmental protection requirements of the project (for example establishing general acceptability of the proposed technology, identifying any special approval-related requirements and determining the need for public consultation or notification).

Once an application is submitted, the facility owner will receive an acknowledgement letter from the Ministry. This will reference the Ministry's intent to update the C of A in accordance with the Protocol. As well, when required by

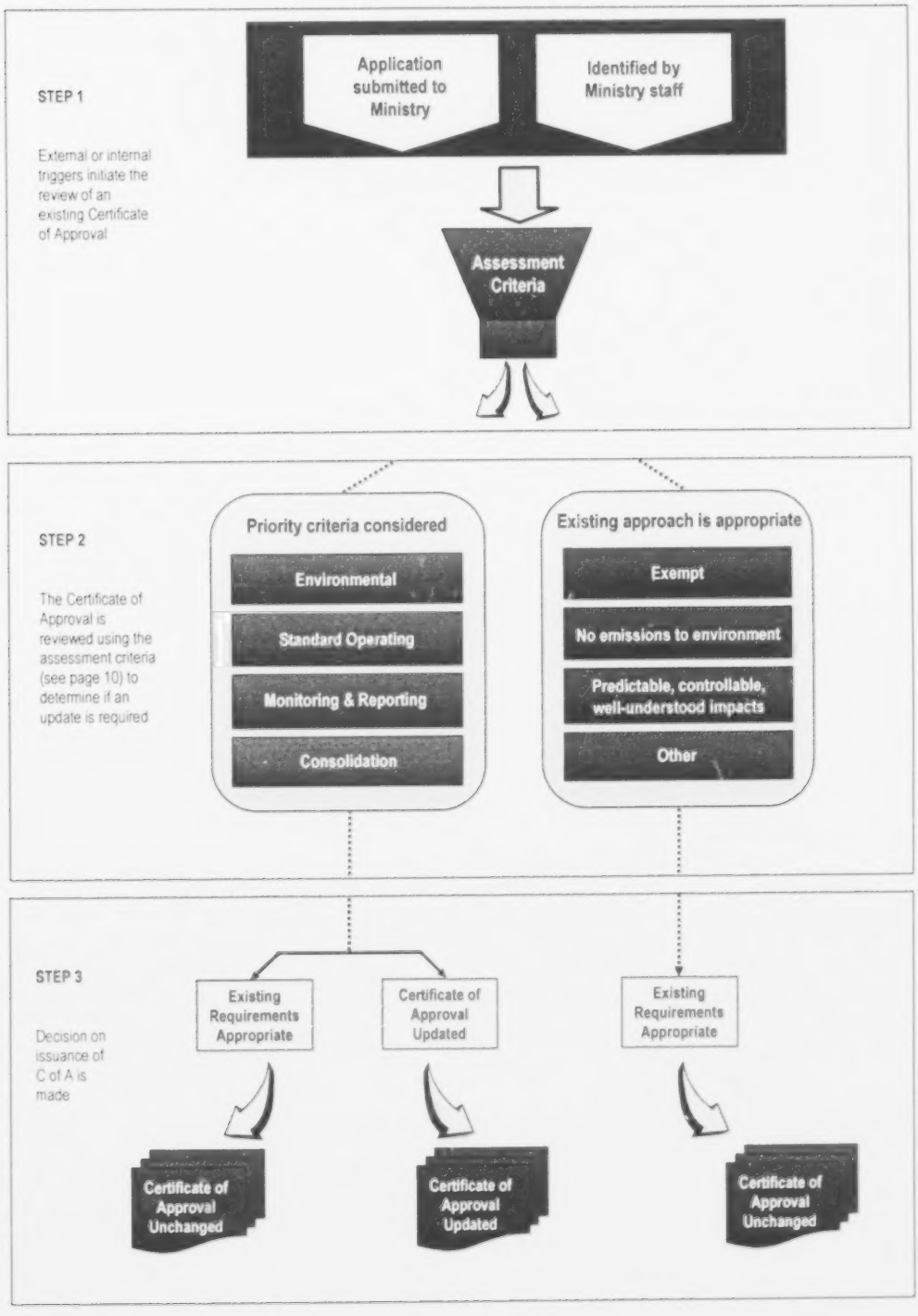
the *Environmental Bill of Rights*, the proposal for the C of A application will be posted on the Environmental Registry for public comment.

When an updated C of A is drafted, a copy of the draft updated C of A is sent to the facility owner for further review, as appropriate.

If an update to a C of A is triggered by Ministry staff, through the course of their compliance, inspection or enforcement activities, the Ministry will either require that an application be submitted or initiate the update.

Upon completion, the final version of the C of A is issued. When required, a decision posting on the Environmental Registry will reflect the manner in which the C of A has been updated at the end of the process.

Figure 1: Process for Updating Certificates of Approval


STEP 1
External or internal triggers initiate the review of an existing Certificate of Approval
Application submitted to Ministry
Identified by Ministry staff
Assessment Criteria
STEP 2
The Certificate of Approval is reviewed using the assessment criteria (see page 10) to determine if an update is required
Priority criteria considered
Environmental
Standard Operating
Monitoring & Reporting
Consolidation
Existing approach is appropriate
Exempt
No emissions to environment
Predictable, controllable, well-understood impacts
Other
STEP 3
Decision on issuance of C of A is made
Existing Requirements Appropriate
Certificate of Approval Updated
Existing Requirements Appropriate
Certificate of Approval Unchanged
Certificate of Approval Updated
Certificate of Approval Unchanged

Assessment Criteria for Air Emissions

The review of the existing C of A is done using the assessment criteria, and may also be based on input from Ministry field and technical staff. The review will determine the extent to which the C of A meets the following requirements:

- Current environmental legislation, regulation, standards, policies, guidelines and procedures.
- Necessary, up-to-date operating requirements.
- Relevant monitoring and reporting requirements.

The review will also:

- encourage Consolidated or Basic Comprehensive Cs of A where appropriate; and
- identify other site-specific requirements as appropriate.

This Protocol contributes to an overall cycle of continuous improvement so that the requirements for existing Cs of A will be made more consistent with the requirements placed on newly issued Cs of A.

Detailed Assessment Criteria

Environmental Requirements

If relevant environmental protection requirements set out in existing Ministry policies, guidelines and objectives are not included, they may be added to the C of A. These requirements include any relevant environmental protection requirements set out in the Key Ministry Documents Related to Air Emissions listed in Appendix A.

Standard Operating Requirements

The Ministry will determine if the C of A includes up-to-date standard operating requirements. If not already included, requirements that may be added to the C of A are as follows:

- Development and maintenance of an operation and maintenance manual relating to the processes with significant potential environmental impacts.

- Notification requirements such as complaint response procedures.
- Record keeping requirements.

Monitoring and Reporting Requirements

If monitoring and reporting requirements appropriate for the type of facility are not included in the existing C of A, requirements that may be added to a C of A are conditions related to:

- the performance limits of the equipment;
- process; and
- overall facility related to the emission of contaminants.

In addition, Basic Comprehensive Cs of A will include the following requirements:

- maintenance of the ESDM Report to document ongoing compliance with performance limits;
- making the Emissions Summary Table that summarizes the facility's emissions and shows compliance with Ministry Point of Impingement limits available for inspection by the public;
- maintenance of a log documenting and describing all modifications made under the limited operational flexibility conditions; and
- provision of an annual written summary to the Ministry of activities undertaken in the previous calendar year at the facility.

Consolidation

During the assessment, the Ministry will consider if the facility has multiple Cs of A that can be replaced by a single C of A.

A decision on encouraging a facility to consolidate Cs of A is based on whether sufficient information is readily available from:

- Ministry information systems;
- supporting documentation submitted by the facility owner; and
- information reasonably obtained from the facility owner during the technical review.

The Ministry may recommend that an application for a Consolidated or Basic Comprehensive C of A be made if:

- emissions from a facility have been targeted under the Selected Targets for Air Compliance (STAC) program (described below) and the Ministry has assessed compliance with Regulation 346 through its review of an ESDM Report prepared for all sources and all contaminants.

NOTE:	If other relevant site-specific requirements (not listed above) are not included in a C of A, the Ministry may decide to update the C of A to address these issues on a case-by-case basis.

What is the STAC Program?

The Selected Targets for Air Compliance (STAC) program uses the authority of existing environmental legislation to require companies to submit an ESDM Report to assess compliance with Regulation 346. The detailed information gathered through a STAC review provides the Ministry with a complete inventory of all the contaminant emissions from each targeted facility. The STAC program and the existing C of A process work together to require companies to demonstrate that aggregate emissions from a facility comply with Ontario's air standards and guidelines or Point of Impingement limits through Regulation 346.

Once the Ministry has reviewed the ESDM Report submitted under the STAC program, and compliance with Regulation 346 has been determined, the company may be requested to submit an application for either a Consolidated or Basic Comprehensive C of A. The advantage of the Basic Comprehensive C of A is the limited operational flexibility allowed by this type of C of A.

Air Emissions Cs of A Where Existing Approach/Requirements are Appropriate

It is unnecessary to use this Protocol in circumstances such as the following:

- Facilities that have ceased operating or are no longer in business. The facility owner may submit an application to the Ministry to revoke a C of A.
- Some types of facilities and equipment are associated with minimal environmental impacts and no longer require a C of A due to exemptions under regulations. Examples include:
    - Regulation 524/98 provides exemptions for air and noise emissions for residential equipment, construction equipment, cleaning operations using only liquid detergents, fire fighting operations and training, prescribed forestry burns, sewage lagoons and clarifiers, visible light

sources, fuel burning equipment for comfort heating, general building ventilation from non-production areas, food and beverage preparation equipment, and some types of mobile equipment; and

- Regulation 505/99 provides exemptions for air and noise emissions from race tracks, outdoor events and firearms shooting ranges, vehicles operated within buildings, some types of fuel dispensing equipment and equipment used during a declared emergency.

- Other Cs of A issued for routine, well-understood activities with low environmental impact such as diesel generators, paint spray booths, and heating, ventilation and air conditions (HVAC) equipment using natural gas or oil as fuel.

Despite the foregoing, the Ministry retains the authority to review and require new or amended requirements in an existing air emissions C of A at any time.

Appendix A: Key Ministry Documents Related to Air Emissions

- A-1 Combustion and Air Pollution Control Requirements for New Biomedical Waste Incinerators
- A-5 Atmospheric Emissions from Stationary Combustion Turbines
- A-7 Combustion and Air Pollution Control Requirements for New Municipal Waste Incinerators
- A-8 Guideline for the Implementation of Canada-wide Standards for Emissions of Mercury and of Dioxins and Furans and Monitoring and Reporting Requirements for Municipal Waste Incinerators, Biomedical Waste Incinerators, Sewage Sludge Incinerators, Hazardous Waste Incinerators, Steel Manufacturing Electric Arc Furnaces, Iron Sintering Plants (June 2003)
- A-9 NOx Emissions from Boilers and Heaters
- Basic Comprehensive Certificates of Approval (Air): A User Guide
- Fact Sheet, Basic Comprehensive Certificates of Approval (Air)
- Summary of Point of Impingement Standards, Point of Impingement Guidelines, and Ambient Air Quality Criteria (AAQCs) – September 2001
- Procedure for Preparing an Emission Summary and Dispersion Modelling Report – June 1998
- Other applicable Ministry guideline documents

Many of these documents can be found at the Ministry of the Environment's Web site: http://www.ene.gov.on.ca/envision/gp/index.htm or can be obtained from:

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Environmental Assessment and Approvals Branch
2 St. Clair Avenue West, Floor 12A
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